

IN THE CLAIMS:

1. (Currently Amended) A masking device for a flat-screen colour-display cathode-ray tube, of the type comprising a support frame for a tensioned shadow mask and a tensioned shadow mask mounted on the support frame so as to be subjected to tension at room temperature, characterized in that:

- the support frame is made of a hardened Fe-Ni alloy having a thermal expansion coefficient between 20°C and 150°C of less than $5 \times 10^{-6} \text{ K}^{-1}$ and a yield stress $R_{p0.2}$ at 20°C of greater than 700 Mpa, and, for each temperature T, a mean expansion coefficient α_{20-T} between 20°C and the temperature T;

B1 - the tensioned shadow mask is made of an Fe-Ni alloy having a thermal expansion coefficient between 20°C and 150°C of less than $3 \times 10^{-6} \text{ K}^{-1}$, and, for each temperature T, a mean expansion coefficient α_{20-T} between 20°C and the temperature T;

the hardened Fe-Ni alloy of which the support frame is made and the Fe-Ni alloy of which the shadow mask is made being chosen in such a way that:

- when said temperature T is below a temperature T_1 , the said mean expansion coefficient α_{20-T} , between 20°C and the temperature T, of the hardened Fe-Ni alloy of which the support frame is made is greater than the said mean expansion coefficient α_{20-T} , between 20°C and the temperature T, of the Fe-Ni alloy of which the shadow mask is made,
- when said temperature T is above said temperature T_1 , the said mean expansion coefficient α_{20-T} , between 20°C and the temperature T, of the hardened Fe-Ni alloy of

which the support frame is made is less than the mean expansion coefficient α_{20-T} ,
between 20°C and the temperature T, of the Fe-Ni alloy of which the shadow mask is
made, and

- said temperature T_1 is less than 350°C.

2. (Original) Device according to Claim 1, characterized in that the hardened Fe-Ni alloy
of which the support frame is made is an Fe-Ni alloy of the " γ '-hardened" type whose chemical
composition comprises, by weight:

$$40.5\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 43.5\%$$

$$0\% \leq \text{Co} \leq 5\%$$

$$0\% \leq \text{Cu} \leq 3\%$$

$$1.5\% \leq \text{Ti} \leq 3.5\%$$

$$0.05\% \leq \text{Al} \leq 1\%$$

$$\text{C} \leq 0.05\%$$

$$\text{Si} \leq 0.5\%$$

$$\text{Mn} \leq 0.5\%$$

$$\text{S} \leq 0.01\%$$

$$\text{P} \leq 0.02\%$$

the balance being iron and impurities resulting from the smelting,

and the Fe-Ni alloy of which the shadow mask is made is an Fe-Ni alloy whose composition
comprises, by weight:

$$32\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 37\%$$

$$0\% \leq \text{Co} \leq 5.5\%$$

$$0\% \leq \text{Cu} \leq 2\%$$

$$0\% \leq \text{Nb} + \text{Ta} + \text{Mo} + \text{W} + \text{Zr} \leq 2\%$$

$$0 \leq \text{Mn} \leq 0.5\%$$

$$\text{Si} < 0.2\%$$

$$\text{C} < 0.02\%$$

$$\text{S} < 0.01\%$$

$$\text{P} < 0.02\%$$

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the balance being iron and impurities resulting from the smelting.

3. (Original) Device according to Claim 2, characterized in that the chemical composition of the Fe-Ni alloy of which the shadow mask is made is such that:

$$32\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 35.5\%$$

$$0\% \leq \text{Co} \leq 4\%$$

$$0\% \leq \text{Cu} \leq 2\%$$

$$0\% \leq \text{Nb} + \text{Ta} + \text{Mo} + \text{W} + \text{Zr} < 0.2\%.$$

4. (Original) Device according to Claim 2, characterized in that the chemical composition of the Fe-Ni alloy of which the shadow mask is made is such that:

$$33.5\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 37\%$$

$$0\% \leq \text{Co} \leq 5.5\%$$

$$0\% \leq \text{Cu} \leq 2\%$$

$$0.2\% \leq \text{Nb} + \text{Ta} + \text{Mo} + \text{W} + \text{Zr} \leq 2\%.$$

5. (Original) Device according to Claim 1, characterized in that the hardened Fe-Ni alloy of which the support frame is made is an Fe-Ni alloy of the "γ'-hardened" type whose chemical composition comprises, by weight:

$$43.5\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 45.5\%$$

$$0\% \leq \text{Co} \leq 5\%$$

$$0\% \leq \text{Cu} \leq 3\%$$

$$1.5\% \leq \text{Ti} \leq 3.5\%$$

$$0.05\% \leq \text{Al} \leq 1\%$$

$$\text{C} \leq 0.05\%$$

$$\text{Si} \leq 0.5\%$$

$$\text{Mn} \leq 0.5\%$$

$$\text{S} \leq 0.01\%$$

$$\text{P} \leq 0.02\%$$

the balance being iron and impurities resulting from the smelting.

and the Fe-Ni alloy of which the shadow mask is made is an Fe-Ni alloy whose chemical composition comprises, by weight:

$$35.5\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 37\%$$

$$0\% \leq \text{Co} \leq 5.5\%$$

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$$0\% \leq \text{Cu} \leq 2\%$$

$$0 \leq \text{Mn} \leq 0.5\%$$

$$\text{Si} < 0.2\%$$

$$\text{C} < 0.02\%$$

$$\text{S} < 0.01\%$$

$$\text{P} < 0.02\%$$

the balance being iron and impurities resulting from the smelting.

6. (Cancel)

B1 7. (Currently Amended) A tensioned shadow mask made of an Fe-Ni alloy having a
whose chemical composition such that comprises, by weight:

$$33.5\% \leq \text{Ni} + \text{Co} + \text{Cu} \leq 37\%$$

$$0\% \leq \text{Co} \leq 5.5\%$$

$$0\% \leq \text{Cu} \leq 2\%$$

$$0.2\% \leq \text{Nb} + \text{Ta} + \text{Mo} + \text{W} + \text{Zr} \leq 2\%$$

$$\underline{0 \leq \text{Mn} \leq 0.5\%}$$

$$\underline{\text{Si} < 0.2\%}$$

$$\underline{\text{C} < 0.02\%}$$

$$\underline{\text{S} < 0.01\%}$$

$$\underline{\text{P} < 0.02\%}$$

the balance being iron and impurities resulting from smelting.

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8. (Original) Device according to Claim 1, characterized in that the hardened Fe-Ni alloy of which the frame is made is a hardened Fe-Ni alloy of the "beryllium-hardened" type, of the "carbide-hardened" type or of the "solid-solution-hardened" type.

9. (Previously Added) The device according to claim 1, wherein said temperature T_1 is less than 300°C.

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